

RGB

White light is made of a combination of three colours: red, green and blue. This is additive colour; when no light is present, you have black; when the maximum amount of all three colours is present, you have white. Other combinations of the three primary colours yield different colours.

Human eyes, digital cameras and electronic scanners detect light as combinations of RGB, and computer monitors or any other video screen reproduce colour using RGB.

CMYK

Colours on paper are made in the opposite manner to that of TV screens and computer monitors. It is a combination of four colours: cyan, magenta, yellow, and black (key). This is subtractive colour; when no ink/toner is present, you have white; when the maximum amount of all four colours is present, you have black. Other combinations of the four primary colours yield different colours.

Translating RGB to CMYK - The Importance of working in CMYK

While some photo printing processes employ RGB, most printing processes use CMYK or spot colours (spot colours are explained below). At Allbiz, we only ever print using CMYK or spot colour processes.

If given an RGB file, our systems will need to translate the RGB colours into CMYK. This is fraught with problems. Firstly, it is impossible to exactly match an RGB colour to an equivalent CMYK colour (for example there are many varieties of black in CMYK, but only one in RGB). Secondly, most computers are not colour-calibrated; the result is that the colours you see on your computer screen are much different than the colours that print out.

If you are designing your own artwork for printing, you should always work in CMYK. Our printers are calibrated to match your file's CMYK extremely closely - to a professional standard - but give unpredictable and unwanted results when printing from an RGB file.

Spot Colour

Spot Colour (also called Pantone Matching System/PMS) is only used in wet ink (offset) printing. It is only suitable for a little bit or 'spot' of colour, where you might have a letterhead printed in one colour, or have a tiny piece in a second colour. Each individual colour used is mixed separately to a standard formula, like paints.

